The embodiments of the invention in which an exclusive property or priviiege is claimed are defined as follows:

1. A method of reducing or inhibiting cell hyperlasia and restoring vessel wall biocompatibility in a mammal or human in need of such treatment, comprising administering orally an amount of 13-hydroxyoctadeca-9Z, 11E-dienoic acid (13-HODE) effective to reduce or inhibit vessel wall thrombogenicity.

2. The method of claim 1, wherein 13-HODE is administered as a pharmaceutical composition comprising 13-HODE and a pharmaceutically acceptable carrier, auxiliary, or excipient.

3. The method of claim 2, wherein the carrier is a mono-, di- or triglyceride oil.

4. The method of claim 2. wherein the carrier is selected from the group consisting of corn, sunflower, safflower, cottonseed, grape seed, olive, evening primrose, borage, fish body and fish liver oils.

5. The method of claim 2, wherein the carrier is an ester of a fatty acid containing 16-26 carbon atoms and one or more double bonds.

6. The method of claim 2, wherein the ester is selected from the group consisting of ethyl-eicosapentaenoic (ethyl-EPA), oleic, linoleic, alpha-linoleic, stearidonic, gamma-linolenic, dihomogammalinolenic, arachidonic, docosapentaenoic and docosahexaenoic (ethyl-DHA).

7. The method of claim 2, wherein the composition further comprises a fat-soluble antioxidant selected from the group consisting of ascorbyl palmitate, tocopherols, and ascorbic acid in the presence of lecithin.

8. The method of claim 2, wherein the composition further comprises an additive selected from the group consisting of aggregants, disaggregants, osmotic pressure regulating salts, buffers, sweeteners, and coloring agents.

9. The method of claim 2, wherein the composition is administered as a formulation selected from the group consisting of tablets, dragees, capsules, granules, solution, suspensions, and lyophilized compositions.

10. A method of correcting the inhibition of endogenous 13-HODE synthesis by omega-3 fatty acids by incorporating 13-HODE into formulations of omega-3 fatty acids.

11. The method of claim 1, wherein 13-HODE is administered as a pharmaceutical composition comprising 13-HODE and omega-3 fatty acids.

12. The method of claim 10 or 11, wherein the omega-3 fatty acid is selected from the group consisting of EPA, DHA, a derivative of EPA and a derivative of DHA.

13. The method of claim 10 or 11, wherein the omega-3 fatty acid is ethyl-EPA or ethyl-DHA.

14. A pharmaceutical composition for oral administration of 13-hydroxyoctadeca-9Z, 11E-dienoic acid (13-HODE) in its free form.

15. A pharmaceutical composition of 13-hydroxyoctadeca-9Z, 11E-dienoic acid (13-HODE) for oral administration, comprising, 13 HODE and a pharmaceutically acceptable carrier.

16. The pharmaceutical composition of claim 14 or 15 wherein the daily dose of 13-HODE is equal to or less than 100 mg.

17. The pharmaceutical composition of claim 15, wherein the carrier is a mono-, di- or triglyceride oil.

18. The pharmaceutical composition of claim 15, wherein the carrier is selected from the group consisting of corn, sunflower, safflower, cottonseed, grape seed, olive, evening primrose, borage, fish body, and fish liver oils.

19. The pharmaceutical composition of claim 15, wherein the carrier is an ester of a fatty acid containing 16-26 carbon atoms and one or more double bonds.

20. The pharmaceutical composition of claim 15, wherein the carrier is selected from the group consisting of ethyl-eicosapentaenoic (ethyl-EPA), oleic, linoleic, alpha-linolenic, stearidonic, gamma-linolenic, dihomogammalinolenic, arachidonic, docosapentaenoic and docosahexaenoic (ethyl-DHA).

21. The pharmaceutical composition of claim 14 or 15, wherein the composition is administered in the form selected from the group consisting of tablets,

dragees, capsules, granules, solutions, suspensions and lyophilized compositions.

22. The pharmaceutical composition of claim 14 or 15 wherein the composition further comprises a fat-soluble antioxidant selected from the group consisting of ascorbyl palmitate, tocopherols, and ascorbic acid in the presence of lecithin.

23. The pharmaceutical composition of claim 14 or 15 wherein the composition further comprises an additive selected from the group consisting of aggregants, disaggregants, osmotic pressure regulating salts, buffers, sweeteners, and coloring agents.

24. A pharmaceutical composition of 13-HODE comprising 13-HODE and omega-3 fatty acids.

25. The pharmaceutical composition of claim 24, wherein the omega-3 fatty acid is selected from the group consisting of EPA, DHA, a derivative of EPA and a derivative of DHA.

26. The pharmaceutical composition of claim 24, wherein the omega-3 fatty acid is selected from the group consisting of ethyl-EPA and ethyl-DHA.

27. The use of the pharmaceutical composition of claim 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 or 26 to treat:

(a) cardiovascular or cerebrovascular disease
(b) inflammatory or autoimmune disease
(c) infection with bacteria, viruses, fungi, or protozoa,
(d) respiratory disease
(e) gastrointestinal disease
(f) renal or urinary tract disease
(g) skin disease
(h) neurological or psychiatric disease
(i) disease of the reproductive system
(j) diabetes, syndrome A or any complication of diabetes

28. The use of the pharmaceutical composition of claim 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 or 26 to treat a disease or condition associated with overactive protein kinases.

29. The use of claim 28 wherein the disease or condition is associated with increase in Protein Kinase C activity and/or an increase in Mitogen Activated Protein Kinase activity.

30. The use of the pharmaceutical composition of claim 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 or 26 to treat a disease or condition where endothelial function is disordered.

31. The use of the pharmaceutical composition of claim 14, 15, 16, 17, 18, 19, 20, 21, 22 or 23 to treat cancer or the metastatic spread of cancer.

32. The use of the pharmaceutical composition of claim 14, 15, 16, 17, 18, 19, 20, 21, 22 or 23 to prevent cancer or the metastatic spread of cancer.